

## REMARKS

In the office action dated June 1, 2004, the Examiner rejected claims 38 – 52. Applicants are amending claims 38 – 41 and canceling claim 49.

### Rejections Under 35 U.S.C. §112

In section 1 – 2 of the Office Action, the Examiner rejected claims 38 – 52 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim subject matter which applicants regard as their invention. Specifically, the Examiner rejected to the term “data link transponder for passively receiving broadcast data” as a transponder conventionally emits a signal in response to a signal. In response, Applicants are amending the claims to remove “transponder” from the term. In addition, claim 49 was rejected and is being canceled. Accordingly, Applicants request withdrawal of the rejections under §112.

### Rejections Under 35 U.S.C. §102 (e)

In sections 3 and 4 of the Office Action, the Examiner rejected claims 38, 42 – 44, 47, and 51 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,072,433 to Young et al. (hereinafter *Young*).

Applicants submit that claim 38 is patentable over *Young* by at least reciting:

A system for collision avoidance in formation flight, the system on a lead aircraft, the system comprising:

- a. data link ~~transponder~~ means for passively receiving broadcast data from a second aircraft, the broadcast data comprising indicia of position of the second aircraft;
- b. navigation means for providing indicia of current position of the lead aircraft;
- c. means for determining relative aircraft position of the lead and second aircraft in accordance with the indicia of position of the second aircraft and the indicia of the current position of the lead aircraft;
- d. means for generating a steering command to maintain separation between the lead aircraft and the second aircraft in accordance with relative aircraft position of the lead and second aircraft; and
- e. means for transmitting the steering command to the second aircraft.

In contrast, the vehicles disclosed in *Young* do not passively receive broadcast data. Each AFF member must continuously adjust its attitude to search for signals from other AFF

members. See Fig. 10 and corresponding text at column 13, line 60 – column 14, line 2. While the AFF members do not need to actively emit signals in order to receive the signals, the AFF members must actively adjust their attitude to search for signals. The claimed invention is purely passive and does not require any attitude adjustment of the lead aircraft in order to receive a signal.

Accordingly, Applicants submit that claim 38 is patentable over *Young* and request withdrawal of this rejection. Further, as claims 42 – 44, 47, and 51 depend through to claim 38, withdrawal of this rejection with respect to these claims is also requested.

#### Rejections Under 35 U.S.C. § 103(a)

In sections 5 and 6 of the Office Action, the Examiner rejected claims 39 – 41, 45, 46, 48 – 50 and 52 under 35 U.S.C. §103(a) as being unpatentable over *Young* in view of U.S. Patent No. 5,043,903 to Constant (hereinafter *Constant*) and either one of a reference entitled “ADS-Mode S System Overview” by Boisvert et al. (hereinafter *Boisvert*) or U.S. Patent No. 5,570,095 to Drouilhet, Jr. et al. (hereinafter *Drouilhet*). In response, Applicants submit that the claims 39 – 41, 45, 46, 48, 50, and 52 (claim 49 is canceled) are patentable over the cited references at least due to their dependency from claim 38. Accordingly, Applicants request withdrawal of this rejection.

In section 7 of the Office Action, the Examiner rejected claims 38 – 52 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,153,836 to Fraughton et al. (hereinafter *Fraughton*) in view of *Constant* and either one of *Boisvert* or *Drouilhet*. Applicants submit claims 38 – 48, and 50 – 52 are patentable over these references because *Constant* does not teach means for generating and transmitting a steering command in the lead aircraft as suggested by the Examiner and required in the combination of references to render obvious the claimed invention. Specifically, *Constant* teaches a leader transmits commands to other units (slaves). These commands dictate a position, heading, speed and altitude of each slave. Using these commands, the slaves then calculate “piloting orders,” which are actual headings and speeds required of each slave to achieve the commanded position, heading and speed. In other words, *Constant* teaches that the leader tells the slaves where to go, not how to get there. The slaves must calculate the how. In contrast, claim 38 requires that the system on the lead aircraft

calculate the how (steering command) and transmit the how to the slaves. Hence, the combination of the references cannot yield the claimed invention.

Accordingly, Applicants submit that claim 38 is patentable over the cited references. Further, the remaining claims are patentable at least by virtue of their dependency to claim 38. Therefore, Applicants request withdrawal of these rejections.

In section 8 of the Office Action, the Examiner rejected claims 38 – 52 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,596,332 to Coles et al. (hereinafter *Coles*) in view of *Constant* and either of *Boisvert* or *Drouilhet*. Applicants submit that due to the same reasons mentioned above with respect to *Constant*, the combination of the references cannot yield the claimed invention.

Accordingly, Applicants submit that claim 38 is patentable over the cited references. Further, the remaining claims are patentable at least by virtue of their dependency to claim 38. Therefore, Applicants request withdrawal of these rejections.

#### Conclusion

Reconsideration is respectfully requested. Applicants believe the case is in condition for allowance and respectfully requests withdrawal of the rejections and allowance of the pending claims.

The Examiner is invited to telephone the undersigned at the telephone number listed below if it would in any way advance prosecution of this case.

Respectfully submitted,

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